

**UNITED STATES OF AMERICA  
DEPARTMENT OF TRANSPORTATION  
FEDERAL AVIATION ADMINISTRATION  
RENTON, WASHINGTON 98055-4056**

In the matter of the petition of

**SPECTRUM AEROMED, INC.**

for an exemption from §§ 25.562 and  
25.785(b) of Title 14, Code of Federal  
Regulations

**Regulatory Docket No. 29572**

**GRANT OF EXEMPTION**

By letter dated April 26, 1999, Mr. Gary Heyne, Director of Engineering, Spectrum Aeromed, Inc., 304 4th Street North, Wheaton, Minnesota 56296, petitioned for an exemption from §§ 25.562 and 25.785(b) of Title 14, Code of Federal Regulations [hereafter referred to as the Federal Aviation Regulations (FAR)] to the extent necessary to permit certification of medical stretchers for transport of persons whose medical condition dictates such accommodation. The exemption is for an installation on Gulfstream Model G-V series airplanes.

**Section of the FAR Affected:**

**Section 25.785(b)** [Section 25.785(a) at Amendment 25-64] requires that each seat, berth, safety belt, harness, and adjacent part of the airplane at each station designated as occupiable during takeoff and landing must be designed so that a person making proper use of those facilities will not suffer serious injury in an emergency landing as a result of inertia forces specified in §§ 25.561 and 25.562.

**Section 25.562** specifies dynamic test conditions for qualification of occupant injury criteria, as well as structural retention criteria.

### **The Petitioner's Supportive Information:**

“Spectrum Aeromed, Inc., hereby petitions for an exemption from § 25.562 and part of § 25.785(b) of the Federal Aviation Regulations (FAR), to the extent necessary to permit certification of medical systems for transport of persons whose medical condition dictates such accommodations. The exemption is for installing the Spectrum Aeromed modular and dedicated medical systems into the Gulfstream Model G-V.”

“Spectrum Aeromed owns supplemental type certificates (STC's) for the modular and dedicated medical systems in numerous part 23, 25, 27, and 29 aircraft. The certification requirements for those aircraft have resulted in a good service history with no adverse experience. No medical systems have been shown to meet the dynamic criteria. FAR parts 23, 27, and 29 specifically exclude litters from the dynamic criteria.”

“Spectrum Aeromed notes that the estimated cost of demonstrating compliance of medical system installations with dynamic test requirements is quite high considering the limited number of units for which the cost could be amortized. Since none have been shown to comply with the dynamic test criteria, medical systems can not currently be used on airplanes whose type certificate basis include the dynamic requirements. In this case, a person who needs to travel for essential medical care can either charter an airplane at 5 to 10 times the cost of a commercial ticket, or if the cost is prohibitive, fail to receive the needed treatment (the consequences of which may be fatal). Another alternative would be flying on an aircraft whose certification basis does not require dynamic testing. This would offer no increase in safety and may not be available.”

“Spectrum Aeromed feels that granting the petition would be in the public interest for the following reasons:

1. The exemption would relieve an economic burden on a segment of the traveling public already dealing with adversity.
2. The level of safety that would be provided is an acceptable level of safety, given the limited usage and exposure of the medical system.
3. Compliance with the dynamic test requirements would be difficult at best, and very expensive, while returning a marginal safety benefit. In addition, section 25.562 is written specifically for seats and would not be easy to apply to a litter.”

Spectrum Aeromed also requests that the publication of its petition for public comment be waived for good cause. Spectrum Aeromed states that it is currently working with Gulfstream on a project to install medical systems into the Model G-V. This project involves three G-V aircraft, serial numbers 560, 569, and 573. The first aircraft is

scheduled to be delivered to the customer on July 1, 1999. Spectrum Aeromed must have the waiver granted and the STC completed by this date. With this in mind, the petitioner states that the waiver process and the STC process must be expedited in order to meet this deadline. Failure to meet this deadline would be detrimental to Spectrum Aeromed, and would delay the deployment of lifesaving equipment.

Spectrum Aeromed notes that its petition is consistent with Exemption No. 6515, which was granted for litter installations on Boeing 777, Airbus A330, and Airbus A340 aircraft; and Exemption No. 6625, which was granted for litter installations on Cessna Model 750 (Citation X) aircraft.

In summary, the petitioner is requesting exemption from the dynamic requirements of § 25.562, as required for berths in accordance with § 25.785(b,) for their installation of a medical system in a Gulfstream V airplane.

#### **Publication and Public Comment:**

The FAA finds, for good cause, that action on this petition should not be delayed by publication and comment procedures for the following reasons:

1. A grant of exemption would not set a precedent. This petition for exemption and the reasons presented in it are almost identical to several other exemptions previously granted by the FAA. When those other petitions were published in the Federal Register for public comment, no comments were received. The FAA does not consider there to be any unique features of this petition that would be likely to receive comment from the public.

2. A delay in acting on the petition would be detrimental to the petitioner, and would effectively deny a valuable service to persons with critical medical conditions.

#### **The Federal Aviation Administration's Analysis/Summary:**

The FAA agrees that stretchers for medical use were not considered in the context of the dynamic test requirements of § 25.562 when the regulation was developed. Occupancy of other berths during takeoff and landing for ambulatory persons was not considered feasible under the conditions of § 25.562; and for the purposes of compliance, stretchers are considered “berths.” The FAA acknowledges that part 25 differs from other aircraft regulatory standards in this regard.

The FAA agrees that demonstrating compliance with the requirements of § 25.562 would be very difficult, and applicability of the existing pass/fail criteria to these installations is questionable.

The FAA has also considered the cost implications and the overall benefits resulting from usage of the stretchers. If a person is forced to charter an airplane, when carriage by commercial carrier would have otherwise been acceptable, it is possible that the resultant

cost would be prohibitive, and the necessary medical attention will not be available. Certainly, any safety benefit from averting the possible consequences of a stretcher not meeting the dynamic test requirements is moot in this case.

The FAA has also considered that the use of stretcher is limited, and on a case-by-case basis. The exposure to the possibility of an accident on any given flight is therefore less than for airplanes in general. Since use of the stretcher for takeoff and landing is limited only to those persons whose medical condition dictates travel in that manner, the FAA does not consider this a precedent setting finding.

With respect to the overall level of safety, the FAA notes that full compliance with the requirements of § 25.561 will be required for the stretcher. This is consistent with the standards for all seats prior to the adoption of § 25.562. Thus, as noted by the petitioner, an alternative to this exemption would be to seek transportation on an airplane whose certification basis does not require dynamic testing (i.e., an airplane with an earlier certification basis). While differences in certification bases are not sufficient to justify an exemption, the FAA does not consider that safety necessarily would be served by using an airplane with an earlier certification basis. However impractical this alternative might be, the FAA does not consider it a desirable approach.

#### **Grant of Exemption Determination:**

In consideration of the foregoing, I find that a grant of exemption is in the public interest, and will not significantly affect the overall level of safety provided by the regulations. Therefore, pursuant to the authority contained in 49 USC 40113 and 44701, formerly §§ 313(a) and 601(c) of the Federal Aviation Act of 1958 as amended, delegated to me by the Administrator (14 CFR 11.53), the petition of Spectrum Aeromed, Inc. for exemption to the requirements of §§ 25.562, and 25.785(b) of the FAR for installation of stretchers is hereby granted, with the following provision:

Occupancy for takeoff and landing is limited to non-ambulatory persons. Suitable means to identify this limitation shall be provided as part of the stretcher type design.

Issued in Renton, Washington, on July 1, 1999.

//original signed by//

John J. Hickey, Manager  
Transport Airplane Directorate  
Aircraft Certification Service